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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/824,648	04/15/2004	Jee-hong Min	Q80067	7696
23373	7590	04/13/2006	EXAMINER	
SUGHRUE MION, PLLC 2100 PENNSYLVANIA AVENUE, N.W. SUITE 800 WASHINGTON, DC 20037			DZIERZYNSKI, EVAN P	
			ART UNIT	PAPER NUMBER
			2875	

DATE MAILED: 04/13/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b>	<b>Applicant(s)</b>	
	10/824,648	MIN ET AL.	
	<b>Examiner</b>	<b>Art Unit</b>	
	Evan Dzierzynski	2875	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 01 March 2006.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☐ Claim(s) 1-19 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 15-19 is/are allowed.
- 6) ☒ Claim(s) 1-14 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 15 April 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All    b) ☐ Some \*    c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |   |   |
|---|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)                        | 4) <input type="checkbox"/> Interview Summary (PTO-413)                     |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)    | Paper No(s)/Mail Date. _____  |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date _____   | 6) <input type="checkbox"/> Other: _____                                    |

## DETAILED ACTION

### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kraft (US Pub 2003/0147259) in view of Umemoto et al. (US Pat 6616289).

As for claim 1, Kraft discloses an edge-light type backlight system comprising a light guide panel including a light incident surface (Fig 1) into which light enters and a light emitting surface (Fig 1) from which light is emitted. Kraft teaches a light source which projects light to the light incident surface, and a polyhedral optical deflector including a first surface and a second surface, the first and the second surface are on opposite sides of a normal line orthogonal to the light incident surface and being more distant from each other as distance from the light incident surface increases, wherein the optical deflector is disposed on at least one of the light emitting surface and a surface opposite to the light emitting surface. Kraft fails to teach backlight system using a rod-shaped light source. Umemoto et al. teaches the use of a rod-shaped light source (column 8, lines 29+) in use with a similar backlight system. It would have been obvious for one of ordinary skill in the art to combine the rod-shaped light of Umemoto et al. with the device of Kraft, since the use of point source lights and rod/tube lights are

equivalents in the art and the use of a rod-shaped source would reduce the number of parts in the device.

As for claim 2, Kraft further discloses a plurality of optical deflectors (Fig 1A) are arranged along the light incident surface.

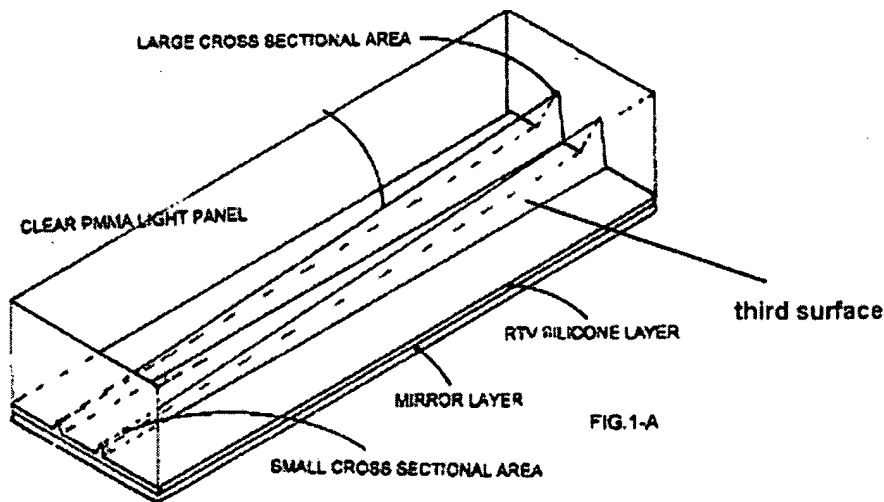
As for claim 3, Kraft further teaches that the optical deflector has the same refractive index as the light guide panel, since they are both made from the same material because of being integral parts of the device (as shown in Fig 1A).

As for claim 4, Kraft further discloses an optical deflector that is integrally formed with the light guide panel (Fig 1A).

As for claim 5, Kraft further discloses that the first surface and the second surface are symmetrical about the normal line orthogonal to the light incident surface (Fig 1A).

As for claim 6, Kraft further discloses that the first surface and the second surface are extended up to a surface opposite to the light incident surface (Fig 1A).

As for claim 7, Kraft further discloses that the optical deflector further includes a third surface (indicated below, the underside) opposing the light emitting surface, and the third surface is parallel to the light emitting surface.



As for claim 8, Kraft further discloses that a cross-section of the optical deflector in parallel to the light emitting surface is in the shape of a triangle whose oblique sides are the first and second surfaces and the bottom side is opposite to the light incident surface (Fig 1A).

As for claim 9, Kraft further discloses that a cross-section of the optical deflector in parallel to the light emitting surface is in the shape of a trapezoid whose oblique sides are the first and second surfaces and the bottom side is opposite to the light incident surface (Fig 1A).

As for claim 10, Kraft teaches a light guide panel of an edge-light type backlight system comprising a light incident surface (Fig 1) into which light enters, a light emitting surface (Fig 1), from which light is emitted and an optical deflector (Fig 1A) protruding from the light emitting surface and a surface opposite to the light emitting surface. It can be concluded from Kraft's drawings that a cross-section of the optical deflector in parallel to the light emitting surface being in the shape of a triangle whose bottom side is a surface opposite to the light incident surface, the triangular cross-section being

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extended in a direction perpendicular to the light emitting surface. Kraft fails to teach backlight system using a rod-shaped light source. Umemoto et al. teaches the use of a rod-shaped light source (column 8, lines 29+) in use with a backlight system. It would have been obvious for one of ordinary skill in the art to combine the rod-shaped light of Umemoto et al. with the device of Kraft, since the use of point source lights and rod/tube lights are equivalents in the art.

As for claim 11, Kraft teaches a plurality of optical deflectors are arranged along the light incident surface (Fig 1A).

As for claim 12, Kraft further discloses that the optical deflector further includes a third surface (see the drawing on page 3 of the instant application) opposing the light-emitting surface, and the third surface is parallel to the light-emitting surface.

As for claim 13, Kraft further discloses that the optical deflector further includes a third surface opposing the light emitting surface, and the third surface is parallel to the light emitting surface (Fig 1).

As for claim 14, Kraft further teaches that the optical deflector is extended up to a surface opposite to the light incident surface (Fig 1A).

### ***Response to Arguments***

Applicant's arguments filed 3/1/2006 in regard to claims 1-14 have been fully considered but they are not persuasive. The fact that Kraft states that the device is preferably used with fiber optics or a light pipe does not mean that the device cannot be used with a rod-shaped light or that Kraft teaches away from using a rod-shaped light.

**MPEP 2123 [R-3]** A reference may be relied upon for all that it would have reasonably suggested to one having ordinary skill the art, including nonpreferred

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embodiments. *Merck & Co. v. Biocraft Laboratories*, 874 F.2d 804, 10 USPQ2d 1843 (Fed. Cir.), cert. denied, 493 U.S. 975 (1989). See also *Celeritas Technologies Ltd. v. Rockwell International Corp.*, 150 F.3d 1354, 1361, 47 USPQ2d 1516, 1522-23 (Fed. Cir. 1998) (The court held that the prior art anticipated the claims even though it taught away from the claimed invention. "The fact that a modem with a single carrier data signal is shown to be less than optimal does not vitiate the fact that it is disclosed."). The tetrahedral grooves of Kraft do in fact make up a polyhedral optical deflector as seen in Fig 1a and Fig 1. A polyhedron, by definition is a solid formed by plane faces. Although the tetrahedral components of Kraft are shown as grooves, the panel that they are defined in is a solid figure formed by plane faces that has optical deflectors (Fig 2A), which meets the limitations of claim 1.

***Allowable Subject Matter***

Claims 15-18 are allowed over the prior art.

The following is an examiner's statement of reasons for allowance: Applicant's arguments filed 3/9/2006 are convincing.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

***Conclusion***

**THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).


A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within

TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Evan Dzierzynski whose telephone number is (571)-272-2336. The examiner can normally be reached on Monday through Friday 7:00 am - 3:30pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Renee Luebke can be reached on M-F (571)-272-2009. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



RENEE LUEBKE  
PRIMARY EXAMINER